REMARKS

This response is filed within one month after the shortened statutory period of three months which expired on November 8, 2007.

I. Claim Amendments

Claims 1-17 and 37-40 are currently pending. With this response, the Applicants have amended claims 1, 8, 37 and 39. Support for the amendments to claims 1, 8 and 37 are found at Figure 4C2 and Figure 4D2 of the originally filed application.

II. 35 U.S.C. § 112, second paragraph

The Examiner contends that claim 39 is rejected under 35 USC 112, second paragraph as being vague and indefinite. In reply, the Applicants have amended claim 39 as follows:

"*...wherein said ~~heating~~ ramping up to a second temperature is followed by a dwell interval and a cool-to-room-temperature interval.*"

With the amendment shown above and in the amended claims provided herein, the Applicants submit that claim 39 is clear and definite according to 35 USC 112, second paragraph.

III. 35 U.S.C. § 103(a) Claim Rejections

A. Szobonya (US 3, 517,437)

The Examiner contends that claims 1, 2, 8, 9, 12 and 17 stand rejected under 35 USC 103(a) as being unpatentable over Szobonya. The Applicants respectfully disagree as follows.

Szobonya discloses a method of forming a terminal structure in a refractory base and a "*terminal pin (10) positioned in the hole (16) so that the top surface of the pin lies a small distance (26)(Fig4) below the top surface of the base member (18); since the firing shrinkage characteristics of refractory base materials may be determined...the top surface of the terminal*

pin (10) and the base (18) will be substantially flush." (col. 3, lines 23-48 of Szobonya). The Applicants submit that Szobonya ***does not*** disclose, teach or suggest:

"...*forming an intermediate blind hole in said ceramic sheet extending from said upper surface toward said lower surface;*
inserting a wire into said blind hole;
firing said sheet and wire to a temperature sufficient to sinter the sheet material and cause it to form a hermetic compression seal around said wire; and
removing sufficient sheet material from said sheet lower surface to expose said wire thus forming a through hole containing said wire."

The above is disclosed and taught by the present invention and recited in claim 1 as presented herein. A similar recitation is found in claim 8. Szobonya does not disclose a method for hermetically sealing a wire. The disclosure of Szobonya teaches a method for mounting an object onto a base with superior strength and durability (col. 2, lines 3-6 of Szobonya). Szobonya does not mention a method for sealing a wire to a ceramic sheet. Szobonya does not even approach the method recited in claims 1 and 8 as recited above— *forming intermediate blind holes in ceramic sheet...inserting a wire...firing said sheet and wire...removing sheet material to expose the wire.* The formation of blind holes in ceramic sheeting and later formation of through holes from such intermediate blind holes is not contemplated nor suggested in Szobonya. The Applicants submit that claims 1 and 8 are not obvious in view of Szobonya. The Applicants submit that at least by virtue of their dependency on claims 1 and 8, claims 2, 9, 12 and 17 are not obvious in view of Szobonya.

B. Mizuhara et al. (US 5,368,220) in view of Chirino et al (3,999,004)

The Examiner contends that claims 1-17 are rejected under 35 USC 103(a) as being unpatentable over Mizuhara et al in view of Chirino et al. (3,999,004). The Applicants respectfully disagree as follows.

The Examiner contends that Mizuhara teaches *a method of fabricating a hermetic electrical feedthrough comprising: providing an unfired pre-sintered ceramic sheet...forming a*

hole 17 in said ceramic sheet...inserting a wire into said hole; firing said sheet and wire to a temperature sufficient to sinter the sheet.... The Applicants respectfully disagree and submit that while Mizuhara teaches an unsintered/pre-sintered ceramic article at col. 2, 38-49, Mizuhara further teaches providing a feedthrough to an insertion hole 17 in a core 20 (col. 3, lines 23-25 and Figure 4, Mizuhara). Furthermore, Mizuhara teaches that the hermetic seal of a feedthrough is enchanced by providing an alloy paste 27 to a pigtail 25 prior to heating the feedthrough 26 (col. 6, lines 63-66, Mizuhara). As shown in Figure 5, Mizuhara teaches a through hole core, and at col. 4, lines 4-16, Mizuhara teaches preferred active alloy wires. As acknowledged by the Examiner, Mizuhara does not teach or suggest that formation of blind holes.

The Examiner contends that Chirino et al teach forming multiple blind holes in a ceramic sheet (Figures 2, 5, 6, and 9). The Applicants submit that the blind holes in Chirino provide for interconnecting means between metallized planes (col. 1, lines 60-66, Chirino). The blind holes in Chirino are permanent features of the patented ceramic structure. The blind holes in Chirino *are not* intermediate blind holes formed in ceramic sheeting for the insertion of a wire during firing, wherein after firing, material is removed, and a through hole is formed containing the wire. The Examiner contends that the steps of removing sufficient sheet material from said sheet lower surface to expose said wire is notoriously well known to furnish final products. The Applicants submit that the removal of a sheeting material itself may be known, but removing material that forms an intermediate blind hole for fabricating a hermetic feedthrough, and rendering the blind hole a through hole is not known and is unobvious. Prior art blind holes are kept as such and not modified to be through holes.

Furthermore, the Applicants submit that one skilled in the art in view of Mizuhara and the through hole core (20), would not be led to form *intermediate* blind holes for the hermetic firing process in view of Chirino because the blind holes in Chirino are not facilitating the hermetic sealing of a wire in a ceramic sheeting. The blind holes in Chirino are for interconnecting means between metallized planes. Thus, one skilled in the art would not be led to believe the interconnecting blind holes of Chirino would serve as an intermediate to enhance a method for fabricating a hermetic feedthrough.

The Examiner is respectfully requested to consider the main claims of the present application, where formation of blind holes is functional to the later formation of through holes. By the same token, formation of though holes in the main claims of the present application is conditional to the intermediate formation of blind holes. The issue is not one of finishing. The problem here is that of providing through holes with better sintering. Such problem is solved in an unobvious manner by initially providing blind holes, inserting a wire in the blind holes, compressing the wire through sintering, and only then forming through holes. In this process of forming through holes containing a wire, intermediate blind holes are a nonobvious means to achieve better sintering.

In view of the above remarks, the Applicants submit that independent claims 1 and 8 are patentable over Mizuhara in view of Chirino, and that at least by virtue of their dependencies, claims 4-7 which depend from claim 1 and claims 9-10, 13-17 which depend from claim 8, are also patentable over Mizuhara in view of Chirino.

C. Szobonya in view of Poniatowski et al. (DE19651851)

The Examiner contends that claims 37 and 39 are rejected under 35 USC 103(a) as being unpatentable over Szobonya in view of Poniatowski. The Applicants respectfully disagree.

The Examiner states that while Szobonya does not teach the limitation that said firing occurs by ramping up to a first temperature at a first heating rate; then ramping up to a second temperature higher than the first temperature at a second heating rate, that Poniatowski et al teach a method of producing platinum-coated oxide ceramic object wherein firing ceramic and platinum occurs by ramping up to a first temperature at a first heating rate; then ramping up to a temperature higher than the first temperature at a second heating rate at page 2, lines 34-35 of translated reference; and that claims 37 and 39 are thus obvious over Szobonya in view of Poniatowski et al.

As stated above, the Applicants submit that Szobonya does not disclose a method for hermetically sealing a wire and that the formation of blind holes in ceramic sheeting is not contemplated nor suggested in Szobonya. Thus, in view of Szobonya, one skilled in the art

would only have a method for mounting an object onto a base with superior strength and durability, but not a method for providing a hermetic seal for a feedthrough by forming intermediate blind holes, as recited in claim 37. The firing steps taught by Poniatowski et al as discussed above do not provide for the intermediate blind holes of the presently claimed invention. Thus, one skilled in the art with the mounting method of Szobonya combined with the firing steps taught by Poniatowski would not arrive at a method for providing a hermetic seal comprising *forming one or more intermediate blind holes.*

In view of the above remarks, the Applicants submit that claim 37 and dependent claim 39 are not obvious over Szobonya in view of Poniatowski et al.

D. Mizuhara et al in view of Chirino et al and further in view of Poniatowski

The Examiner contends that claims 37, 39 and 40 are rejected under 35 USC 103(a) as being unpatentable over Mizuhara et al in view of Chirino et al and further in view of Poniatowski. The Applicants respectfully disagree as follows.

As stated previously in view of claims 1 and 8, the combination of Chirino's multiple blind holes in a ceramic sheet with the through hole core (20) of Mizuhara does not result in

"...forming one or more intermediate blind holes in said ceramic sheet extending from said upper surface toward said lower surface;
inserting a wire in each of said one or more blind holes;
firing said sheet and wire to a temperature sufficient to sinter the sheet material and cause it to form a hermetic compression seal around said wire; and
removing sufficient sheet material from said sheet lower surface to expose said wire thus forming a through hole containing said wire, as recited in amended claim 37.

The Applicants further submit that the ceramic firing techniques of Poniatowski in combination with Mizuhara and Chirino would still not provide one skilled in the art with the claimed method of claim 37 for *forming one or more intermediate blind holes.* Accordingly, the

Applicants submit that claim 37 and claims 39 and 40 which depend therefrom, are patentable over Mizuhara et al in view of Chirino et al and further in view of Poniatowski.

E. Szobonya and Poniatowski et al in view of Greuter et al

The Examiner contends that claim 38 is rejected under 35 USC 103(a) as being unpatentable over Szobonya and Poniatowski et al as applied to claim 37 and further in view of Greuter et al (5,071,828). The Applicants respectfully disagree as follows.

As stated above in section C, combining the ceramic firing techniques of Poniatowski with the method of forming a terminal structure in a refractory base of Szobonya, would not provide one skilled in the art with a method that would produce a "*...forming one or more intermediate blind holes in said ceramic sheet extending from said upper surface toward said lower surface;*" as recited in amended claim 37 from which claim 38 depends.

Thus, the firing technique of Greuter et al wherein a first heating rate is about 1°C/minute and a second heating rate of about 5°C/minute in combination with the techniques of Poniatowski et al applied to the disclosure of Szobonya would still not provide one skilled in the art with the claimed method of claim 38 because Greuter does not teach or suggest the forming of blind holes for providing a hermetic seal of a feedthrough. Accordingly, the Applicants submit that claim 38 is patentable over Szobonya and Poniatowski et al as applied to claim 37 and further in view of Greuter et al.

F. Mizuhara et al., Chirino et al and Poniatowski et al further in view of Greuter

The Examiner contends that claim 38 is rejected under 35 USC 103(a) as being unpatentable over Mizuhara et al, Chirino et al., and Poniatowski et al as applied to claim 37 and further in view of Greuter. The Applicants respectfully disagree.

As stated above in section D, the ceramic firing techniques of Poniatowski in combination with Mizuhara and Chirino fail to teach *forming one or more intermediate blind holes*. Combining these teachings with the heating rates disclosed in Greuter et al as discussed

in section E, does not provide one skilled in the art with the step of *forming one or more intermediate blind holes*. Accordingly, the Applicants submit that claim 38 which depends from claim 37, is patentable over Mizuhara et al., Chirino et al and Poniatowski et al as applied to claim 37 and further in view of Greuter et al.

* * * * *

IV. Conclusion

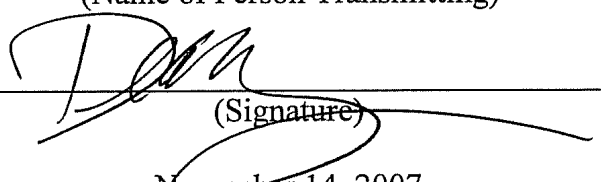
Applicants respectfully contend that all conditions of patentability are met in the pending claims as amended. All amendments herein are made without prejudice. The Examiner is respectfully requested to pass the application to issue.

The Commissioner is authorized to charge any additional fees, which may be required or credit overpayment to deposit account no. 50-0922. In particular, if this preliminary amendment is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 50-0922.

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office via EFS, on

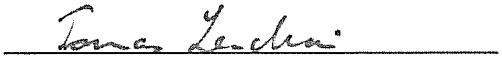
November 14, 2007
(Date of Transmission)

Deanna L. Fintz
(Name of Person Transmitting)


(Signature)

November 14, 2007
(Date)

Respectfully submitted,



Tomas Lendvai, Ph. D.
Reg. No. 57,488
Second Sight Medical Products,Inc.
12744 San Fernando Road
Building 3
Sylmar, CA 91342
(818) 833-5072 voice
(818) 833-5080 facsimile